

REMARKS

This responds to the Office Action mailed on August 31, 2004 .
Claims 1, 10 and 24 are amended. As a result, claims 1-24 and 42 are now pending in this application.

§112 Rejection of the Claims

Claims 1-24 and 42 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed. The summary of the present application clearly sets forth the basis for why each single detector does not detect the entire spectrum of light passed by the bandpass filter. In particular, it references changing mole fractions of Al or In to change the wavelength that they absorb. The Examiner also appears to be taking official notice that a bolometer has an unlimited detection range. Reference is made to “the primary reference” having a “basically unlimited detection range”. It is assumed that this primary reference referred to is Cole et al. It should be noted that Cole et al. refers to an IR bolometer. This seems to indicate that it’s wavelength sensitivity is limited to IR. Thus, the statement that it has an unlimited detection range is respectfully traversed. A proper reference, or affidavit to support the statement is requested.

In order to facilitate prosecution of the application, the claims have been amended to more clearly state that the detectors themselves are responsive to different wavelengths passed by the bandpass filter, rather than generalizing that the spectrum of light passed by the filter is wider than can be detected by any type of detector. This should clarify the claims, and is first being done at this point due to the issue first being raised in the last Office Action.

Please note that claim 42 is not amended, and in fact is indicated as allowed in the Office Action mailed 8/31/2004.

The amendment to the claims is believed to place the application in condition for allowance, or in the alternative, removes issues to simplify appeal. No new matter is introduced by the amendments. The amendments are believed to more clearly state what was expressed in the previous amendment to the claims, and thus are not believed to introduce new issues. This

also is believed to have the effect of clarifying issues for purposes of appeal should the claims not be found allowable.

§103 Rejection of the Claims

Claims 1-4, 9 and 43 were rejected under 35 USC § 103(a) as being unpatentable over Cole et al. (U.S. Patent No. 5,550,373) in view of Tokuda et al. (U.S. Patent No. 5,144,397). This rejection is respectfully traversed, as the references either alone or combined do not show each and every element of the claimed invention. Please note that claim 43 was previously cancelled.

The claims have been amended to recite that neither the first detector nor the second detector can detect the entire spectrum of radiation passed by the bandpass filter, but that they detect adjacent high and low bands passed by the bandpass filter. Cole et al., implies that the band of radiation passed by the filter is detected by a single detector or array of detectors. Thus, Cole et al., was not faced with the problem of detecting a band of radiation that was wider than could be detected by a single type of detector. Tokuda et al., clearly is directed at distinguishing between two frequencies, not detecting a broader spectrum passed by a bandpass filter. Given the claim amendments, a prima facie case of obviousness cannot be established, and the rejection should be withdrawn.

There is no suggestion to combine Cole et al. With Tokuda et al. The Office Action states that “it would have been obvious to use the Tokuda et al., detector in Cole et al., device to improve the wavelength sensitivity. Note that what is passed by the Fabry-Perot is examined.” This suggestion does not appear to come from the prior art, and thus is believed not sufficient to incite one of average skill in the art to combine the references. Since Cole et al., appears content with a single type of detector, there is no suggestion from Cole et al., to look for ways to improve the wavelength sensitivity as stated in the Office Action. Tokuda et al., is interested in clearly distinguishing from different frequencies. The abstract of Tokuda et al., states: “for adjusting a critical wavelength at which the light absorption characteristic of the device dramatically changes.” The summary indicates that: “It is an object of the present invention to provide a light responsive semiconductor device which has enhanced wavelength selectivity and produces a bistable output current as a function of the wavelength of incident light.” As clearly seen, the

references are directed toward entirely different problems. There is no desire in Cole et al. to improve wavelength sensitivity. Combining the detectors in Tokuda et al. with the Cole filter would only result in the ability to distinguish between different frequencies, not to detect high and low wavelength bands passed by a bandpass filter as claimed in the present application. Thus, even if combined, the references do not teach or suggest the claimed invention.

Claims 8, 10 and 24, in addition to distinguishing the references based on using separate detectors to detect high and low bandwidth wavelengths, also include the concept that such bands of wavelengths overlap. Tokuda et al. specifically requires that detectors have the ability to distinguish between different frequencies. Overlapping wavelengths implicitly destroys any ability to distinguish. Thus, the references are not properly combinable with respect to claims 10 and 24, and the claims that depend therefrom.

Claims 5-8 and 12 were rejected under 35 USC § 103(a) as being unpatentable over Cole et al. (U.S. Patent No. 5,550,373) in view of Tokuda et al. (U.S. Patent No. 5,144,397) and further in view of Hier et al. (U.S. Patent No. 6,407,439) and Koslowski et al. (U.S. Patent No. 6,483,116). These claims depend from claims which are believed allowable, and thus are also believed allowable.

Claims 10, 11, 13-17, 19, 23 and 24 were rejected under 35 USC § 103(a) as being unpatentable over Cole et al. (U.S. Patent No. 5,550,373) in view of Tokuda et al. (U.S. Patent No. 5,144,397). These claims depend from claims which are believed allowable, and thus are also believed allowable.

Claims 20-22 were rejected under 35 USC § 103(a) as being unpatentable over Cole et al. (U.S. Patent No. 5,550,373) in view of Tokuda et al. (U.S. Patent No. 5,144,397) and Yokoi (U.S. Patent No. 6,459,484) and further in view of Hier et al. (U.S. Patent No. 6,407,439) and Koslowski et al. (U.S. Patent No. 6,483,116). These claims depend from claims which are believed allowable, and thus are also believed allowable.

Allowable Subject Matter

Claim 18 was indicated to be allowable if rewritten to overcome the rejection(s) under 35 USC § 112 set forth in the Office Action.

Claim 42 was indicated to be allowed.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 373-6972 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.


Respectfully submitted,

BARRETT E. COLE ET AL.

By their Representatives,

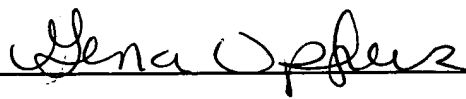
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 373-6972

Date 10/29/2004

By 
Bradley A. Forrest
Reg. No. 30,837

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 24 day of October, 2004.

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